



Chemical Preparedness Update

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DPHL CT Procedures

Training/Validation/Proficiency
Referral lab status

Methods, Training, & Exercises

Current Chemical Preparedness Testing

- LRN-C Qualified Level Two Laboratory
- **ICP/MS Methods:**
 - Heavy & Trace metals in Urine
 - As, Se (DRC-ICP/MS)
 - Blood Metals
 - Blood Lead*

Current Chemical Preparedness Testing

- LRN-C Qualified Level Two Laboratory
- **GC/MS Methods:**
 - Cyanide in Whole Blood
 - Volatile Organic Compounds in Blood

Upcoming Chemical Preparedness Testing

- **Nerve Agent Metabolites in Urine by LC/MS/MS (OPNA)**
 - LRN-C and vendor training complete
 - Instrumentation installed
 - Funding – materials
 - Validation
 - Qualifying proficiency test (PT): Feb 2009

Upcoming Chemical Preparedness Testing

- **Ricin & Abrin Biomarker in Urine by LC/MS/MS**
 - Requires completion of OPNA method
 - LRN-C Training 2009
 - Funding – materials
 - Validation
 - Qualification: 1 of 3 PTs in 2009

Delayed or Postponed Methods

- **Arsenic & Selenium Speciation in Urine by DRC-ICP/MS**
 - Expandable: Cr, V
 - Instrumentation and Software installed
 - LRN-C Method Training delayed due to software – hardware interface issues
- **Sulfur Mustard Metabolites in Urine by GC/MS**
- **Funding – not at present**

Future Chemical Preparedness Testing

- **Funding, funding, funding...**
 - Nitrogen Mustards in urine
 - Adamsite (vomiting agent)
 - Riot/Tearing agents
 - Lewisite Metabolites
 - FDA Food methods
 - EPA Unknown chemical screens
 - Pesticides and HaloAcetic Acids
 - BIOMONITORING
 - ??????

Equipment Updates

- **Installed Gilson SPE215**
 - Semi-automated solid phase extraction system
 - Multiple position system
 - 4 transfer probes
 - He, solvent driven
 - OPNA
 - Ricin & Abrin
 - Pesticides?
 - Other?

Equipment Updates

- **Installing LabConco Multi-Hazard Glove box**
 - Use for triaging specimens for BT analysis with AHRF protocol
 - Ventilation and electrical work needed
 - Training and protocols to be developed

Equipment Updates

- **BT Large Volume Water Method**
 - Filter and concentrate 40 L volume to less than 10 mL for PCR and TRF analysis
 - Ventilating Class II Biosafety Cabinet
 - BSC – vacuum
 - Small equipment purchases
- **Bacteriological Water Testing**
 - Presence/Absence Total Coliforms, E. coli

Collection, Packaging, & Shipping Update

Clinical Shipping and Packaging Training (CSICPSD)

- Preparation for LPX
- Required training
 - Every 2 years to ship via air (referral to CDC)
 - Every 3 years to ship via ground (any local)
 - ANY individual involved in the process
 - Packers, shippers, handlers, or receivers
 - (DOT 49 CFR 172.700, IATA DGR 1.5)
- Materials updated every 6 mo. to 1 yr.
 - Dependent on changes in DOT, IATA, and carrier regulations & requirements

Clinical Chemical Exposure Samples

- Collection follow “Chemical Terrorism Event Specimen Collection”
 - Specimens must have two layers of evidentiary seal
 - May be individually sealed with evidence tape
 - Must be initialed, time, and dated
 - Freeze urine samples
 - Chill (do not freeze) blood samples
- Shipping & Packaging:
 - “Chemical Terrorism Event Shipping Instructions – Blood”
 - “Chemical Terrorism Event Shipping Instructions – Urine”
- ALL UPDATED ON CDC website: <http://www.bt.cdc.gov/labissues/>

Environmental Shipping and Packaging (E-SCICPSD)

- Collection of Environmental Specimens for analysis at DPHL or other referral laboratory
- No national standard – yet
- Required for all submitters of non-clinical specimens to DPHL
 - Exception: routine drinking water samples
 - Chain of Custody training is not exempt

Transitioning of Training

- Transitioning to Delaware State Fire School (DSFS)
 - All Specimen Identification, Collection, Packaging, Shipping, and Documentation Courses (SICPSD)
 - Proficiency Testing program (once started)
 - Hazardous Materials Instructors
 - January 2009 – as needed basis (2x/year)
 - Signup sheet for contact/interest
- Not transitioning to DSFS
 - Sentinel Laboratory Training
 - BT Advanced Workshop
 - Exercises

Outreach

- LRN/APHL First Responder Workgroup
 - Developing consensus standards for collection, transport, training
 - Texas CT Meeting – December 2008
- LRN/APHL Proficiency Testing Workgroup
 - Developing PT program for first responders and partner laboratories
 - IAFC HazMat Conference May 2009

Other Internal Projects

- Gas Room Emergency Training
 - DPHL SPL, E Chem., Section Safety Representatives
 - Acetylene (dissolved in acetone)
 - Bulk cryogenics and asphyxiants
 - Vaporized Hydrogen Peroxide – BPL
- Select Agent and Toxin Certification Inspection
 - 4-5 Dec 2008 – lots of preparation
 - Changing standards
- Laboratory Assessment
 - 10 Dec 2008 – Smyrna Opera House
- Cross training – bacteriological water testing with chemists
 - Capacity – flood samples or water emergency

Polling Question:

- Do you have capability to quarantine personnel potentially exposed to a BT or CT agent?
 - Your own staff?
 - First responder staff?
 - DPHL staff?
- How many?
- For how long?
- What materials/agents/syndromes?

Polling Question:

- Do you have a Continuity of Operations Plan in place for service disruptions?
 - Increased sample/patient load?
 - Outbreak?
 - Pandemic?
 - Utility disruption?
 - Civil disruption?
- For how long?
- How many staff affected?

Training

- What are your staff or facility training needs?
- ODP Courses: Excellent, Free Program, for more information:
 - <http://www.ojp.usdoj.gov>
 - <http://www.state.de.us/dema/default.shtml>
 - Call Dwayne Day at DEMA: (302) 659-2214
 - <http://fema.gov>